

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

(DRAFT)

Conditional Major, Operating

Permit: F-07-058

Actaris U.S. Gas Inc.

Owenton, KY 40359

December 27, 2007

Mark Labhart, Reviewer

SOURCE ID:	21-187-00005
AGENCY INTEREST:	6265
ACTIVITY:	APE20060002

SOURCE DESCRIPTION:

Actaris manufactures gas meters. VOC and HAP emissions result from molding, curing, sealing, gluing, painting, and solvent cleaning. The source is potentially major for VOC, individual HAP, and combined HAPs.

The only significant sources of particulate matter (PM) are the painting and powder coating application. PM emissions from painting and powder coating are controlled by filters.

COMMENTS:

Type of control and efficiency

- EP01 is seven diaphragm molding units, curing, and RTV primer and sealant application. All of these activities are controlled by carbon adsorber filters. VOC control efficiency has been assumed to be 40% for the molding and curing and 90% for the primer and sealant based on the manufacturer's technical bulletin.
- EP02 is an open face spray booth with an air atomizing spray gun. Transfer efficiency has been assumed to be 25% because of the type of gun used and the size of the items painted. Although capture is probably around 90%, it has been assumed to be 100% because the PM not captured will settle out in the building containing the booth. Based on the manufacturer data supplied in the source wide application, 95% control efficiency was demonstrated to be the minimum control achieved. Control efficiency has been assumed to be 95%.
- PM emissions from spray cans is assumed to be completely controlled by the building.
- PM emissions from the powder coating application are controlled by an enclosure inside the source's production building and ventilation inside the enclosure is controlled by a filter. The process building is vented inside the source's work area where gravity further controls emissions. The combined controls effectively produce negligible emissions.

- Due to the design and nature of the pyrolysis furnace, PM control efficiency has been assumed to be nearly complete.
- Gravity has been assumed to nearly completely control PM emissions from the parts washer.
- All other activities and emissions are uncontrolled.

Emission factors and their source

- Molding and curing emissions have been based on AP-42 emission factors for autoclave curing. VOC emissions are assumed to be 0.00221 lbs/lb of raw material based on Table 4.12-9 compound 18. HAP emissions are assumed to be 0.00138 lbs/lb of raw material based on the same table.
- All VOCs formulated into raw materials have been assumed to be 100% emitted.
- Transfer efficiency used for PM emissions from painting is assumed to be 25%.
- PM emissions from the powder coating, the parts washer, and the pyrolysis furnace are considered negligible.

Applicable regulations

- 401 KAR 59:010, New process operations, applies to the paint booth, the pyrolysis furnace, powder coating operations, and the parts washer.
- 401 KAR 59:225, New miscellaneous metal parts and products surface coating operations, does not apply to due to the conditional major limitation on VOC emissions.

EMISSION AND OPERATING CAPS DESCRIPTION:

The following emission limitations are source wide.

VOC emission limits have been accepted to preclude regulation applicability. Facility emissions of VOC during any consecutive 12 month period shall not exceed 90 tons.

HAP emission limits have also been accepted to preclude regulation applicability. Facility HAP emissions during any consecutive 12 month period shall not exceed 9.5 tons for each individual HAP and 22.5 tons for all combined HAPs.

PERIODIC MONITORING:

The permittee shall calculate source wide VOC and HAP emissions monthly and calculate new 12-month rolling totals each month.

Dry particulate filters are used for the spray booth EP02. Direct measurements of mass and opacity emissions are not required. Instead daily pressure drop readings, routine maintenance, and recordkeeping will be used assure compliance.

Proper maintenance and operation, including use of filters at the powder coating applicator, is

required to assure compliance with applicable regulations but no additional monitoring is required for any of the other emission units at the source due to the nature of the emissions.

OPERATIONAL FLEXIBILITY:

The source is not restricted as to hours of operation or quantity of product produced while remaining within the caps above.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has only adopted the provisions of 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12 into its air quality regulations.